

VTS-2 Process Photodiodes

VTS_91, 92, 93

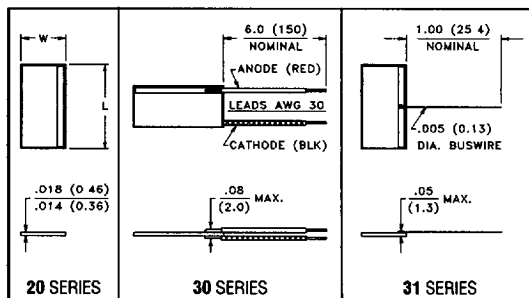
E G & G VACTEC

T-41-51

PRODUCT DESCRIPTION

Large area planar silicon photodiodes suitable for use in the photovoltaic mode, but may be used with a small reverse bias. The low capacitance of these units permits fast response time. These cells have moderate shunt resistance which provides low offset gain in transimpedance op-amp circuits. Cells have solderable contacts and are available with or without flexible flying leads. Devices with leads are acrylic (plastic) coated.

PACKAGE DIMENSIONS inch (mm)



ABSOLUTE MAXIMUM RATINGS

Storage Temperature:

-40°C to 150°C Series 20, 31

-40°C to 105°C Series 30

Operating Temperature:

-40°C to 125°C Series 20, 31

-40°C to 105°C Series 30

CASE 44C

ANODE (ACTIVE) SURFACE SHOWN
CATHODE IS BACKSIDE

DIMENSIONS	VTS_91	VTS_92	VTS_93
L	.400 (10.16)	.600 (15.2)	.800 (20.32)
W	.100 (2.54)	.100 (2.54)	.100 (2.54)
ACTIVE AREA	.026 ² (16.5 ²)	.039 ² (25 ²)	.052 ² (34 ²)

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTS-2 curves, page 87)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTS_91			VTS_92			VTS_93			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{sc}	Short Circuit Current	H = 100 fc, 2850 K	100	130		150	200		180	230		μA
TC I _{sc}	I _{sc} Temp. Coefficient	2850 K		.20			.20			.20		% / °C
I _{sc}	Short Circuit Current	100 μW/cm ² , 940 nm		9.0			13.5			19		μA
V _{oc}	Open Circuit Voltage	H = 100 fc, 2850 K		.33			.33			.33		V
TC V _{oc}	V _{oc} Temp. Coefficient	2850 K		-2.0			-2.0			-2.0		mV / °C
I _D	Dark Current	H = 0, V _R = 100 mV		40	200		40	200		40	200	nA
R _{SH}	Shunt Resistance	H = 0, V = 10 mV		1.5			1.5			1.5		MΩ
TC R _{SH}	R _{SH} Temp. Coefficient	H = 0, V = 10 mV		-11			-11			-11		% / °C
C _J	Junction Capacitance	H = 0, V = 0 V		.30			.45			.60		nF
λ _{range}	Spectral Application Range		400		1100	400		1100	400		1100	nm
λ _p	Spectral Response - Peak			925			925			925		nm
S _R	Sensitivity	@ Peak		.55			.55			.55		A/W